

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

1. (currently amended) A method for operating an internal combustion engine with electrically actuated valves, the method comprising:
operating at least a cylinder in a multi-stroke mode;
and
adjusting the number of valves that operate in a cycle of said cylinder based at least on an operating condition of at least an ~~electromechanical~~ **electrically actuated** valve.
2. (currently amended) The method of Claim 1 wherein said operating condition is a temperature of a valve actuator coupled to at least one of said ~~electromechanically~~ **electrically** actuated valves.
3. (original) The method of Claim 2 wherein said valve actuator is comprised of at least an armature, a coil, and a core.
4. (currently amended) The method of Claim 1 wherein said operating condition of said ~~electromechanically~~ **electrically** actuated valve is an impedance of a valve actuator coupled to at least one of said ~~electromechanical~~ **electrically** actuated valves.

5. (currently amended) The method of Claim 1 wherein said operating condition of said ~~electromechanically~~ **electrically** actuated valve is a temperature of at least one of said ~~electromechanically~~ **electrically** actuated valves.

6. (currently amended) The method of Claim 1 wherein said operating condition of said ~~electromechanically~~ **electrically** actuated valve is an amount of power consumed by a valve actuator coupled to at least one of said ~~electromechanically~~ **electrically** valves.

7. (original) A method for operating an internal combustion engine with valves that may be deactivated, the method comprising:

operating at least a cylinder in a multi-stroke mode;
and

varying the number of valves that operate in a cycle of said cylinder as an operating condition of said engine varies.

8. (original) The method of Claim 7 wherein said operating condition is an engine temperature.

9. (original) The method of Claim 7 wherein said operating condition is at least one of an engine speed and an engine load.

10. (original) The method of Claim 7 wherein said operating condition is a cylinder valve temperature.

11. (currently amended) A method for determining a number of ~~electro-magnetically~~ electrically actuated valves to operate in an internal combustion engine operating in a multi-stroke cylinder mode, the method comprising:

determining an operating condition of an ~~electro-magnetically~~ electrically actuated valve;

operating at least one cylinder of said engine in a multi-stroke mode; and

determining a number of ~~electro-magnetically~~ electrically actuated valves to operate, based on said operating condition, in said at least one cylinder operating in said multi-stroke mode.

12. (currently amended) The method of Claim 11 wherein said operating condition is a temperature of a valve actuator coupled to at least one of said ~~electromechanically~~ electrically actuated valves.

13. (original) The method of Claim 12 wherein said valve actuator is comprised of at least an armature, a coil, and a core.

14. (currently amended) The method of Claim 11 wherein said operating condition of said ~~electromechanically~~ electrically actuated valve is an impedance of a valve actuator coupled to at least one of said ~~electromechanical~~ electrically actuated valves.

15. (currently amended) The method of Claim 11 wherein said operating condition of said ~~electromechanically~~ electrically actuated valve is a temperature of at least one of said ~~electromechanically~~ electrically actuated valves.

16. (currently amended) A method for determining a number of ~~electro-magnetically~~ electrically actuated valves to operate in an internal combustion engine operating in a multi-stroke cylinder mode, the method comprising:

determining an operating condition of said engine;
operating at least one cylinder of said engine in a multi-stroke mode; and
determining a number of ~~electro-magnetically~~ electrically actuated valves to operate, based on said operating condition, in said at least one cylinder operating in said multi-stroke mode.

17. (original) The method of Claim 16 wherein said operating condition is an engine temperature.

18. (original) The method of Claim 16 wherein said operating condition is engine speed.

19. (original) The method of Claim 16 wherein said operating condition is engine load.

20. (currently amended) A method for determining a number of valves to operate in an internal combustion engine operating in a multi-stroke cylinder mode, the method comprising:

determining an operating condition of at least an ~~electromechanical~~ electrically actuated valve;
operating at least two groups of cylinders, a first group operating in a first cylinder stroke mode, and a second group operating in a second cylinder stroke mode; and
determining a number of valves to operate, based on said operating condition, in said first cylinder group and in said second cylinder group.

21. (currently amended) The method of Claim 20 wherein said operating condition is a temperature of a valve actuator coupled to at least one of said ~~electromechanically~~ **electrically** actuated valves.

22. (original) The method of Claim 21 wherein said valve actuator is comprised of at least an armature, a coil, and a core.

23. (currently amended) The method of Claim 20 wherein said operating condition of said ~~electromechanically~~ **electrically** actuated valve is an impedance of a valve actuator coupled to at least one of said ~~electromechanical~~ **electrically** actuated valves.

24. (currently amended) The method of Claim 20 wherein said operating condition of said ~~electromechanically~~ **electrically** actuated valve is a temperature of at least one of said ~~electromechanically~~ **electrically** actuated valves.

25. (currently amended) The method of Claim 20 wherein said operating condition of said ~~electromechanically~~ **electrically** actuated valve is an amount of power consumed by a valve actuator coupled to at least one of said ~~electromechanically~~ **electrically** **actuated** valves.

26. (original) A method for determining a number of valves to operate in an internal combustion engine operating in a multi-stroke cylinder mode, the method comprising:

determining an operating condition of an engine;

operating at least two groups of cylinders, a first group operating in a first cylinder stroke mode, and a second group operating in a second cylinder stroke mode; and

determining a number of valves to operate, based on said operating condition, in said first cylinder group and in said second cylinder group.

27. (original) The method of Claim 26 wherein said operating condition is an engine temperature.

28. (original) The method of Claim 26 wherein said operating condition is engine speed.

29. (original) The method of Claim 26 wherein said operating condition is engine load.

30. (currently amended) A method for operating an internal combustion engine with ~~electromechanically~~ **electrically actuated** valves, the method comprising:

operating at least a cylinder of said internal combustion engine; and

adjusting the number of operating said ~~electromechanical~~ **electrically actuated** valves and the number of strokes in a cycle of said cylinder based at least on an operating condition of said engine.

31. (original) The method of Claim 30 wherein said operating condition is an engine temperature.

32. (original) The method of Claim 30 wherein said operating condition is engine speed.

33. (original) The method of Claim 30 wherein said operating condition is engine load.

34. (currently amended) The method of Claim 30 wherein said number of operating ~~electromechanical~~ **electrically actuated** valves and said number of cylinder strokes is further based on an operating condition of at least an ~~electromechanically~~ **electrically** actuated valve.

35. (currently amended) A method for determining at least a multi-stroke cylinder mode and the number of ~~electro-magnetically~~ **electrically** actuated valves to operate in an internal combustion engine, the method comprising:

determining an operating condition of said internal combustion engine;

determining at least a multi-stroke cylinder mode based on said engine operating condition; and

determining a number of ~~electro-magnetically~~ **electrically** actuated valves to operate based on said engine operating condition.

36. (original) The method of Claim 35 wherein said operating condition is an engine temperature.

37. (original) The method of Claim 35 wherein said operating condition is engine speed.

38. (original) The method of Claim 35 wherein said operating condition is engine load.

39. (currently amended) A computer readable storage medium having stored data representing instructions executable by a computer to control an internal combustion engine of a vehicle, said storage medium comprising:

instructions for operating at least a cylinder in a multi-stroke mode; and

instructions for adjusting the number of operating valves in said cylinder based at least on an operating condition of at least an ~~electromechanical~~ **electrically actuated** valve.